

REMARKS

Claims remaining in the present patent application are numbered 1-36. The rejections and comments of the Examiner set forth in the Office Action dated March 24, 2005 have been carefully considered by the Applicants. Applicants respectfully request the Examiner to consider and allow the remaining claims.

Drawings

The present Office Action requested that new corrected drawings in compliance with 37 CFR 1.121(d) be submitted. Applicants concurrently with the present response to Office Action herewith submit formal drawings. As such, the drawings are in compliance with 37 CFR 1.121(d).

35 U.S.C. §102 Rejection

The present Office Action rejected Claims 1-6, 9, 10, 19-32, and 35-36 under 35 U.S.C. 102(b) as being anticipated by Berg (U.S. Patent No. 5,872,911)

Independent Claims 1 and 27

Regarding independent Claims 1 and 27, embodiments of the presently claimed invention disclose methods of fault

diagnosis, as presently claimed. In particular, independent Claims 1 and 27 of the present invention recite, in part:

- a) at said AP, automatically monitoring network status of said AP on a continual basis over said communication network, said AP coupled to said backbone network; a) receiving a plurality of fault data pertaining to said data network;
- b) filtering said plurality of fault data to obtain a core of fault data;
- i) requesting additional fault data from said data network when said core of fault data is insufficient to identify faults;
- ii) receiving said additional fault data; and
- c) analyzing said core of fault data and said additional fault data to identify a fault associated with said core of fault data. (Emphasis Added)

The claimed embodiments of Claims 1 and 27 pertain to methods of determining faults in a data network. More particularly, the present invention as claimed recites that additional fault data is requested from the data network when the core of fault data is insufficient to identify any faults. The core of fault data and the additional fault data is analyzed to identify a fault.

Applicants respectfully note that the Berg reference does not comprise nor suggest the present invention as claimed in which additional fault data is requested and analyzed with the core of fault data to identify a fault.

In contrast, the Berg reference discloses a system and method for using service impact analysis to provide a

telecommunications network carrier with improved real-time information on network failures. More specifically, the system in the Berg reference only monitors a network for faults by collecting fault data. (See Abstract of the Berg reference) However, the Berg reference does not actively request additional fault data, and further analyses the additional fault data along with core of fault data to identify a fault, as recited in independent Claims 1 and 27 of the present invention.

Thus, Applicants respectfully submit that the Berg reference does not show or suggest the method and system of implementing the method of the present invention as recited in independent Claims 1 and 27. accordingly, Applicants respectfully submit that independent Claims 1 and 27 overcome the cited references and are in a condition for allowance. As such, Claims 2-10 which depend on independent Claim 1 are also in a condition for allowance as being dependent on an allowable base claim. Further, Applicants respectfully submit that Claims 28-36 which depend on independent Claim 27 are also in a condition for allowance as being dependent on an allowable base claim.

Independent Claim 19

In particular, independent Claim 19 of the present invention recites, in part:

a plurality of performance managers coupled to said plurality of subnetworks for monitoring said plurality of subnetworks for said plurality of fault data, [[and]] for filtering said plurality of fault data, and for requesting additional fault data when said plurality of fault data is insufficient, each of said plurality of network performance managers coupled to and associated with one of said plurality of subnetworks; and

a single network management station coupled to each of said plurality of performance managers for analyzing said plurality of fault data that is filtered and said additional fault data to identify faults and isolate sources of said faults.
(Emphasis Added)

The claimed embodiment of Claim 19 pertains to a data network that is capable of fault diagnosis. More particularly, the data network includes a plurality of performance managers that are capable of monitoring the subnetworks for a plurality of fault data. Additionally, the performance managers request additional fault data when the plurality of fault data is insufficient to identify faults within the data network. Thereafter, a network management station analyses the plurality of fault data and the additional fault data that was requested to identify faults and isolate sources of the faults.

Applicants respectfully note that the Berg reference does not comprise nor suggest the present invention as claimed in which additional fault data is requested by the performance managers and analyzed with the plurality of fault data previously collected and filtered to identify faults and isolate sources of the faults.

In contrast, the Berg reference discloses a system and method for using service impact analysis to provide a telecommunications network carrier with improved real-time information on network failures. For analogous reasons set forth in the argument supporting Claims 1 and 27 above, the system in the Berg reference only monitors a network for faults by collecting fault data. However, the Berg reference does not actively request additional fault data, and further analyses the additional fault data along with previously collected and filtered plurality of fault data to identify faults and isolate sources of the faults, as recited in independent Claim 19 of the present invention.

Thus, Applicants respectfully submit that the Berg reference does not show or suggest the method and system of implementing the method of the present invention as recited in independent Claim 19. Accordingly, Applicants respectfully submit that independent Claim 19 overcomes the cited references and is in a condition for allowance. As

such, Claims 20-26 which depend on independent Claim 19 are also in a condition for allowance as being dependent on an allowable base claim.

35 U.S.C. §103 Rejection

The present Office Action rejected Claims 7 and 33 under 35 U.S.C. 103(a) as being anticipated by Berg in view of Kaffine et al. (U.S. Patent No. 6,654,914). In addition, Claims 8 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berg in view of Cromer et al. (U.S. Patent No. 6,304,900). Also, Claims 11-15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berg in view of the Cromer et al. and Kaffine et al. references. Additionally, Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berg in view of Cromer et al. and Kaffine et al., and further in view of Marin (U.S. Patent No. 5,936,940). Also, Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berg in view of Cromer et al. and Kaffine et al., and further in view of Urano et al. (U.S. Patent No. 6,289,379).

Independent Claim 11

Regarding independent Claim 11, embodiments of the presently claimed invention disclose methods of exchanging network information, as presently claimed. In particular,

independent Claim 11 of the present invention recite, in part:

- a) receiving a plurality of fault data pertaining to said data network;
- b) filtering said plurality of fault data to eliminate extraneous data down to a core of fault data;
- i) requesting additional fault data from said data network when said core of fault data is insufficient to identify faults;
- ii) receiving said additional fault data;
- c) determining whether said core of fault data and said additional fault data is due to a broken link or congestion in said data network; d) performing a ping walk to isolate a cause and a source of said core of fault data and additional fault data and to determine a location of said source, if said core of fault data and additional fault data is due to said broken link; and
- e) using deductive reasoning to isolate said source of said core of fault data and additional fault data and identify said cause of said core of fault data and additional fault data, if said core of fault data and additional fault data is due to said congestion.

The claimed embodiment of Claim 11 pertains to a method of fault diagnosis in which additional fault data is requested and received when the core of fault data is insufficient to identify faults within the data network. Thereafter, the claimed embodiment performs a ping walk and analyses results from the ping walk to isolate the cause and source of the core of fault data and additional fault data.

Applicants respectfully note that the Berg reference taken alone or in combination with the Cromer et al. and 3COM-2989/JPW/LCH

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Kaffine et al. reference does not comprise nor suggest the present invention as claimed in which additional fault data is requested, received, and analyzed with the core of fault data when performing a ping walk to isolate the cause and source of the core of fault data and the additional fault data, as presently claimed in independent Claim 11.

In contrast, the Berg reference discloses a system and method for using service impact analysis to provide a telecommunications network carrier with improved real-time information on network failures. For analogous reasons set forth in the argument supporting Claims 1 and 27 above, the system in the Berg reference only monitors a network for faults by collecting fault data. However, the Berg reference does not actively request additional fault data, and further analyses the additional fault data along with previously collected core of fault data during a ping walk to identify faults and isolate sources of the faults.

Additionally, both the Cromer et al. and the Kaffine et al. references fail to overcome the shortcomings of the Berg reference. Specifically, the Cromer et al. reference discloses a data processing system and method for permitting a server computer system to remotely modify operation of a client system's network hardware by analyzing network statistics information that is collected. The Kaffine et al.

reference discloses a system that performs network fault isolation that is in response to user requests for identifying faults within a network. However, neither the Cromer et al. nor the Kaffine et al. references discloses the active request of additional fault data when the filtered core fault data is insufficient for identifying faults, as is recited in independent Claim 11.

Thus, Applicants respectfully submit that the Berg reference taken alone or in combination with the Cromer et al. and the Kaffine et al. references does not show nor suggest the method of the present invention as recited in independent Claim 11. Accordingly, Applicants respectfully submit that independent Claims 1, 11, and 20 overcome the cited references and are in a condition for allowance. As such, Claims 12-18 which depend on independent Claim 11 are also in a condition for allowance as being dependent on an allowable base claim.

CONCLUSION

In light of the facts and arguments presented herein, Applicants respectfully request reconsideration of the rejected Claims.


Based on the arguments presented above, Applicants respectfully assert that Claims 1-36 overcome the rejections of record. Therefore, Applicants respectfully solicit allowance of these Claims.

The Examiner is invited to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

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Date: 7/25/05



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